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ON THE EMPLOYMENT OF INHALATIONS IN CONSUMPTION AND OTHER PULMONARY DISEASES.

BY JAMES TURNBULL, M.D., LIVERPOOL.

THE facts which have been brought forward with reference to the beneficial effects gained by combining local with constitutional means in the treatment of laryngeal diseases, would lead us to expect similar advantages from the direct application by inhalation of volatile remedies to the seat of the disease in pulmonary affections. It can scarcely, however, be said that we have as yet derived an equal advantage from the use of inhalations; and it may be asked how it is that a mode of treatment, which has been used more or less from the earliest periods, has not furnished more definite and useful results; and that, notwithstanding the discovery of a new class of remedies—the anæsthetic, such as ether and chloroform—this mode of treatment may still be said to be in its infancy. One reason may perhaps be that the investigation is a difficult matter, and would require to be made thoroughly on a large scale in order to furnish definite results. It is an easier matter for a medical man to prescribe a medicine than to superintend the inhalation of remedies. I believe, too, that our knowledge of the subject has not advanced as much as it might have done, because many who use inhalations prescribe them without any well-defined object beyond the soothing effect, which may often be attributed rather to the watery vapor than to the medicinal agent; and Dr. Snow has shown that some used for this purpose, such as extract of hyoscyamus, are incapable of being volatilized, and cannot therefore have any effect at all. There are, however, a great variety of volatile agents capable of being used for inhalation, which have never been tried at all; and, as organic chemistry is constantly adding to their number, there can be little doubt that this is a mode of treatment from which we may yet expect to derive a considerable amount of assistance in the treatment of pulmonary diseases.

My own researches on the use of inhalations being at present incomplete, I should not now have touched upon the subject were it not to direct attention to a mode of treatment which seems to me to be somewhat neglected. I shall examine it, therefore, rather with the view of ascertaining what is the actual state of our knowledge of this mode of treatment, and how far we may reasonably expect to derive benefit from the use of inhalations, than for the purposes of stating the results of my own observations.

When volatile remedies are inhaled, they must produce, besides the general effect resulting from absorption, as occurs with chloroform, a local action on the mucous membrane and its secretions, and hence we should expect them to exert an influence in bronchitis, especially the chronic forms. They must also produce a direct action upon the nerves which supply the mucous membrane, and through them upon the muscular fibres of the bronchial tubes. This would lead us to expect that inhalation of antispasmodic remedies would prove beneficial in spasmodic asthma, a deduction which is confirmed by the results of experience. Some remedies, such as iodine, must, when inhaled, act more directly upon the tissue of the lung itself, than when taken internally, and hence it was thought that they might promote absorption of tubercles of the lungs. But experience has not confirmed this view; and, when we consider that tubercle is the result of a constitutional disease, there does not appear to be any good ground to expect advantage, until at least the constitutional tendency to deposition has been arrested or removed. There is still another very common morbid condition of the lungs, upon which the inhalation of volatile agents must act directly, viz., ulcerated cavities resulting from tubercular disease. In these cases it would be a vain hope to expect any lasting good from mere local treatment; but, in conjunction with such treatment as suspends or removes the constitutional disease, it is reasonable to expect benefit from such means. I have never, therefore, used inhalations in those cases where cavities were present in the lungs, except in conjunction with other means, to arrest the disease, and seldom until some decided progress had been made. I conceive, however, that in many cases where the health has been restored by the use of the means which recent improvements have placed in our hands, when the patient has become stout and often apparently well, but has still an open cavity in the lung, it is quite possible that local means may be used with advantage. In such a condition we know that, even after the cavity has contracted, and the process of healing is advancing, the ulcerated surface is liable to become inflamed from exposure to the weather and various other exciting causes; that the unprotected vessels often allow blood to escape, causing hæmoptysis; and that there is always more or less purulent secretion, which weakens the system and re-acts upon the constitutional tendency to tubercular disease. There can be no doubt that the want of power to complete the healing of cavities, even after considerable progress has been made, is one reason that patients so often relapse after they have regained an appearance of health. Without overlooking the fact that tubercles generally exist in other parts of the lungs, I consider that the discovery of means which would promote the cicatrization of cavities in these cases of arrested phthisis is a desideratum and a legitimate object of inquiry. Any means which would promote this object would certainly tend to advance still further the treatment of consumption.

Dr. Snow has shown, in a paper on the inhalation of various medicinal substances, that some must be inhaled with the aid of heat, such as opium, morphia, extract of stramonium, and the gum resins; others with the vapor of water, such as iodine, camphor and creosote; and a third class of substances, such as hydrocyanic acid, ammonia and chlorine, at the ordinary temperature. Mead, in his day, recommended fumigations with the balsams in phthisical cases; and Dr. A. T. Thomson (Cyclopædia of Medicine, Art. Expectorants) has stated that he has seen much benefit from them when inhaled in spasmodic asthma, in shortening the paroxysm and promoting expectoration. Dr. Snow found that ammoniacum gives off a fragrant, rather pungent odor, which can be inhaled very well by most persons. He also found inhalation of the watery extract of opium serviceable in relieving the cough, but that morphia was the most pleasant and suitable preparation of opium for inhalation. Extract of stramonium afforded more or less relief in five or six cases of asthma. He tried iodine in eighteen cases of consumption at the Brompton Hospital; in ten of them it was continued for more than a month; and the conclusion to which he came was, that no benefit could be observed to follow its use. Oil of turpentine appeared to relieve the cough in a few cases, and likewise camphor. He used the volatile alkaloid conia in the quantity of one minim diluted with nine of spirit; the cough was usually relieved, and in two or three cases the breathing also. It would therefore seem from its volatility, at the ordinary temperature, to be a remedy peculiarly suitable for inhalation, if it could be obtained more easily. Dr. Snow also found great relief produced in a few cases of bronchitis with difficult expectoration, from inhaling ammonia, twenty drops of the strong solution being mixed with two ounces of water in a Woulfe's bottle. Chlorine has been much used for inhalation. It was introduced for this purpose in France, and there seems to be good reason to believe that it has proved of material service in cases of chronic bronchitis, and even in some of phthisis. With reference to its use in the latter disease, Sir James Clark has observed, "We have tried it in many instances, and it has in several apparently suspended the progress of the disease." He also states, that it relieved dyspnœa and cough in some cases, though in the majority it produced no amelioration. Dr. A. T. Thomson has likewise stated, that in cases of asthma the relief it produced was very striking, and that in phthisis he had observed the hectic symptoms abate.

Of the various remedies now mentioned, it is probable that the gum resins and balsams, camphor, conia and chlorine, are the most suitable and useful for inhalation; but it does not appear that, by inhalation of opium or morphia, any very decided advantage has been gained over the more ordinary mode of exhibiting them.

The vapor of tar was formerly recommended for inhalation, and few medicines have been more used for this purpose than creosote. Sir Alexander Crichton, in 1823, strongly recommended tar vapor in consumption; but Dr. Forbes, in a report of cases in which he had tried it, published in the Medical and Physical Journal, stated that he had found it injurious in this disease, though of service in some cases of chronic bronchitis. He appears, however, to have used it in cases so far advanced, that no benefit could reasonably have been expected from its employment. Creosote has now superseded the use of tar vapor, which does not, from its irritating properties, seem well suited for inhalation, though there can be very little doubt, when we consider the healing power which it has as an external application, that it must exert a similar effect upon the lungs, if it could be used in such a form as to obtain its beneficial influence apart from its irritating properties. Creosote is, perhaps, more generally used by the profession for the purpose of inhalation than any other remedy; and I believe that when sufficiently diluted with the vapor of water it is one of the most useful. I have found that it has a sedative influence, relieving cough and promoting expectoration, whilst it at the same time not unfrequently lessens the quantity of this secretion both in consumption and bronchitis.

I have already observed that the pyrogenic bodies act upon the mucous and cutaneous surfaces; and my attention has been directed to other bodies of this class by the fact that many of them have remarkable healing properties when applied to ulcers and chronic cutaneous eruptions, a fact which leads me to expect that this class of bodies may, when fully investigated, furnish a suitable remedy for promoting the healing of pulmonary ulcers, and thus supply the desideratum to which I have previously alluded. Many of the pyrogenic bodies possess such healing properties in cutaneous diseases in a greater or less degree. From my own experience, I know that ointments made with tar, creosote, spirit of tar, juniper tar oil, and naphthaline, each have such properties, and are valuable remedies in the treatment of skin diseases.

The inference drawn from these facts, has led me to use for inhalation, some other pyrogenic bodies, viz., spirit of tar, juniper tar oil, Persian naphtha, and eupion. The spirit of tar possesses the healing virtues of tar, without its irritating effects; so much so, that I think it might advantageously supersede the crude substance, as an external remedy. It is more readily volatilized than creosote; and, when inhaled, it produces generally a mild, stimulating, and often rather a soothing effect upon the lungs. In some instances, however, it has appeared to increase the cough and expectoration, and it is not, therefore, suited for cases of bronchitis until inflammatory action has been subdued completely, or for cases of consumption until progress has been made in arresting the disease. Without wishing to speak confidently of the remedy, I may state that it has appeared useful in some cases of the latter disease, in conjunction with other treatment. Juniper tar oil (oleum cadinum), which is a valuable remedy in skin diseases, and much used on the Continent, is less volatile than spirit of tar, and it is more irritating when inhaled. Persian naphtha and eupion possess decided anæsthetic properties: the former, when inhaled along with the vapor of water, has in some instances relieved difficulty of breathing in a very remarkable and decided way; and this fact renders it worthy of trial in spasmodic asthma. Eupion has decided sedative properties, it has relieved cough and difficult breathing, and patients have slept after using it; but it is not a pleasant remedy to inhale, and it has not unfrequently produced sickness afterwards, so that I should not recommend it to be used for this purpose.

I have used several of the essential oils for the purpose of inhalation. Many of them possess decided antispasmodic properties; and I have found that they have a remarkable power of relieving difficulty of breathing, a property which renders them peculiarly suitable for the treatment of spasmodic asthma. The oil should be dissolved in spirit, and inhaled with the vapor of water, so as to dilute its stimulating properties. The oils of cubebs, turpentine and copaiva, which are pure hydro-carbons, are mild in their action, and produce very little stimulating effect. The oxygenated oils which I have used appeared to be more stimulating in their action on the air-tubes; and some of them have stronger anti-spasmodic and expectorant properties. The oils of anise seeds and of peppermint are very stimulating, and in general cause too much irritation. Oil of spearmint is milder and anti-spasmodic, relieving difficulty of breathing in asthma, and even in phthisis. Oil of fennel is also mild. The oil of origanum is moderately stimulating and expectorant. I have also used the oils of rosemary and pimenta, which have similar properties. The hydruret of benzoyle, which is the bitter almond oil deprived of its prussic acid (and closely connected with gum benzoin, becoming benzoic acid in a higher state of oxidation), is very irritating and much too stimulating for inhalation.

Chloroform is a remedy which has been much used by some medical men for the purpose of inhalation, not only in asthma, but in a small quantity in consumption, in order to relieve irritable cough. In some cases, I have dissolved the essential oils in chloroform, and given them in this way for inhalation, their volatility being so much increased that they may thus be given on a handkerchief, as chloroform is usually administered.—*Report on the Treatment of Consumption.*

CONCENTRATED MEDICAL AGENTS.

To the Editor of the Boston Medical and Surgical Journal.

Sir,—In a recent number of the Journal, is an article upon the establishment of the American Chemical Institute, by Messrs. Keith & Hendrickson, New York. I hail the universal knowledge and use of concentrated medical agents by the profession, as one of the distinguishing marks between the infinitesimal homœopath, infinitesimally diluted and attenuated—the patent pill-monger and nostrum-vender—or the quack with his secret remedies, together with Major Standstill—and the learned medical profession with their safe and proper medicinal agents, scientifically-prepared and administered. Well may Dr. Jalap retire from the cares and troubles of professional life, since Dr. Jalapine will undoubtedly prove to be the dutiful son who more than makes good his father's place.

I have long since laid aside all those bulky articles of the materia medica, for which I could substitute the concentrated preparations. I am also using several articles which would have offered, by their bulk, insurmountable objections to their general use, had they not been presented in a concentrated form. My patients have already remarked the difference, and are well pleased with the small fine powders, in place of the coarse bulky ones which the crude material offered.

Who, in general practice, would lay aside quinine for Peruvian bark; strychnine for nux vomica; morphine for crude opium or the unripe capsules of the Papaver somniferum; jalap for jalapine? If no one then will object to the above articles which our fathers prepared and used with so much advantage to themselves and their patients, why should Dr. King's class of practitioners, "whose every obligation begins and ends with themselves" (see page 239, of the present volume of the Boston Medical and Surgical Journal), find fault because their sons have added to the list of concentrated remedies, Podophylline from the Podophyllum peltatum; Leptandrine from the Leptandria Virginica; Macrotin from the Macrotrys racemosa or cimicifuga; or the Hydristine from the Hydrastas Canadensis; and so on for the whole list of drugs and medicines? So far from any objections being urged against the concentrated remedies by those who have used them, I believe all speak with decided approbation of the improvement which science, in the hands of our indefatigable chemists and pharmaceutists, has made in this particular direction. Some who are afraid of anything that is new may object, as it will require some little time and attention to become well acquainted with the concise description of each medicine, and its precise dose. And I make no doubt but some of our remedial agents will be found to have acquired new powers, instead of losing; or at least will have a decided advantage in power and certainty of action over the dead chips and barks with which some of our practitioners have been accustomed to load the stomachs of their patients.

Some may object to their use for fear of additional expense, as their patients are poor and they cannot collect their bills, and their time is as much as they can afford to lose, without being subjected to the additional cost of good and certain remedies. In answer to such, I would say, let the overseers of the poor take charge of these patients, if you are not able; for my part, the convenience and certainty of the concentrated preparations are enough to satisfy me as to cheapness.

In relation to the Macrotin, let me observe that it possesses in full the properties of the root, except its narcotic effects, acting in a peculiar manner upon the uterus, in all uterine diseases, in doses of one to four grains from three to six times a-day; being as near a specific for uterine diseases as quinine is for intermittent fever.

Newport, Pa., July 1st, 1853. C. E. MINER.

DECISIVE EXPERIMENT—PROVING THAT THE CHIEF MOTIVE POWER OF THE BLOOD IS DERIVED FROM RESPIRATION, AND THAT THE LIFE OF THE FLESH IS IN THE BLOOD THEREOF.

BY SAMUEL A. CARTWRIGHT, M.D., NEW ORLEANS, LATE OF NATCHEZ.

[Communicated for the Boston Medical and Surgical Journal.]

WHILE writing this article, June 17th, 1853, there is a living witness, in the court-yard of my office, proving the truth of the doctrine taught by Moses—that the life of the flesh is derived from the blood, and the physiological principle, announced some years ago by Mrs. Emma Willard, that its chief motive power is derived directly and immediately from respiration. The witness is a live crocodile, upwards of six feet in length, and about two feet in circumference. Gen. Felix Houston and Dr. Backee saw it yesterday crawling about the yard. Dr. B. Dowler and some other physicians and individuals have seen it to-day. It has been visited by a number of scientific men ever since the 13th instant. On that day, at ten minutes of 10 o'clock, A.M., its trachea was tied in presence of Drs. Dowler, Backee, Copes, Wharton, and several others. The temperature of the room was 87°, that of the reptile's body 78°. In twenty minutes after the ligation it fell into a state of asphyxia. But soon the liver began to act spontaneously, and it had some four or five copious dejections from the bowels. As the purging progressed it began to recover from the asphyxia, and at length sprang from the table and snapped at the by-standers. It was supposed that these unlooked-for phenomena might be owing to the trachea not being sufficiently secured to prevent the admission of air into the lungs. Two additional ligatures were placed upon it. Yet the heavings of the chest and a sound resembling respiration continued to be observed. This proceeded, no doubt, from the consumption of the atmospheric air stored away in the large air-sacs, which are known to exist in the lungs of the saurian tribe of animals, and some others that can remain under water a long time without breathing. The air-sacs answer the purpose of diving bells. After the carbonic acid, retained in the blood by the compression of the trachea, was thrown off by the spontaneous action of the liver, the air contained in the sacs, or natural diving bells, was sufficient to support a low degree of vitality. With a view of compressing the sides of the air-sacs together, to prevent the air therein from being used by the lungs, and the carbonic acid from escaping, the abdomen, chest and cloaca were compressed by a bandage. The bandage was applied at 11 o'clk., and in a few minutes the reptile again fell into a state of asphyxia. At half after 11 o'clock fire was applied to the most sensitive parts of the body. Some slight twitching of the muscles followed the application, proving that sensation and muscular irritability were not wholly destroyed. At this stage of the experiment the company left to visit Prof. Riddell's chemical laboratory to witness an experiment the Professor's brother was making. At fifteen minutes after 12 o'clock the company re-assembled; having been absent three quarters of an hour, and found the crocodile dead. Muscular irritability seemed to be entirely destroyed. Fire was repeatedly applied to the most sensitive parts of the body, and not a single movement, twitch or symptom of vitality could be elicited thereby. After ten minutes had been spent to enable the gentlemen present to try experiments to extort a symptom of vitality, and after they had all convinced themselves that the animal was certainly dead, I proceeded, at twenty-five minutes after 12 o'clock, to make a dissection, and to expose the abdominal and thoracic viscera to view. The whole extent of the abdomen and thorax was laid open. A cross incision was also made, and the anterior and lateral walls of the thorax and abdomen were fastened back by hooks, so as to bring the lungs, liver, bowels, and the sac containing the heart, under the direct action of the senses of sight and touch. No twitch or the smallest indication of life was elicited by the dissection. The animal had been previously unbound, and lay on the table—a dead subject undergoing dissection. At length the pericardium was slit open by an incision five inches in length—exposing the heart and its auricle to view. On exposing the heart to the external air, and taking it in the hand, slight twitches or muscular contractions, eight times in a minute, were felt.

At half after 12 o'clock, more than two and a half hours after the ligation, insufflation was commenced by inserting the nozzle of a common-sized fire bellows into the trachea. At this stage of the proceeding the company got tired and began to drop off, being fully convinced that insufflation nor nothing else could restore life. The process of insufflation, in about ten minutes, appeared to begin to change the tissues of the reticular network of the lungs to a brighter color. This was supposed, however, to be owing to the direct action of the external air on the membranes. At length small bloodvessels, barely visible, began to be seen on the exposed surfaces, where none could be seen before—proving that the blood was in motion through the pulmonary tissues. The heart was now felt, and its pulsations had become evidently much stronger and had increased from eight to eighteen beats in a minute. The insufflation was steadily persevered in until 1 o'clock, when the motions of the heart had increased to 34 pulsations. Fire was now applied, and some faint evidences of returning muscular irritability were elicited. An ice-water enema was thrown into the bowels, and the whole surface of the body, including the exposed viscera, was frequently wetted with ice-water. As the weather was very hot, this measure was resorted to, to prevent the blood from undergoing chemical decomposition. At ten minutes after 1, the animal seemed to revive, and made ineffectual efforts to breathe. The intercostal muscles and the diaphragm having been cut, the efforts were fruitless. Soon after this, fire was applied, and it writhed its body and moved its tail. As yet the head appeared to be perfectly dead, the eyes glazed and motionless. At half after 1, it would move and writhe its body on being rubbed with ice. At thirty-five minutes after 1, the bellows was removed, and a metallic tube, with a calibre large enough to admit the little finger, was inserted into the trachea. Dr. Copes sewed up the rent in the pericardium, and also stitched together the muscles of the throat and abdomen, which had been divided by the crucial incisions. The dense skin was pierced by an awl, brought together and secured by sutures. At 3 o'clock the other extremity of the divided trachea was put into the tube, and the divided ends brought together and fastened over the tube. The crocodile was then removed from the table and placed under the hydrant. It breathed freely, opened its eyes, and life and intelligence were restored. Dr. Dowler, being unwell, had left before the resuscitation. Indeed all had left, except Drs. Copes, Wharton and Nutt. I sent for Dowler, and when he returned and saw the crocodile alive, he raised his hands and said, "*glorious experiment.*"

Two days ago, the poor reptile appearing to suffer from the tube in the trachea, I removed it. Dr. Dowler calls every day to see the subject. But I entertain no hopes of its ultimate recovery, as the wounds inflicted on it, in order to expose the viscera to view and to watch the changes which occurred during the passage from death unto life, are of too serious a nature to be cured.

Practical Remarks.—In exposing the viscera, care was taken to avoid cutting any large bloodvessel or piercing the lungs. If much blood be lost, resuscitation cannot be effected from the want of the material to operate on. It is thought, however, that the loss of a little blood is rather beneficial than otherwise, as it enables the remaining mass to move more readily through the lungs, by removing the congestion in the pulmonary capillaries. In measles, when the eruption has been repelled and the skin gets blue and cold, the loss of a little blood from the arm will facilitate the circulation through the lungs, clear the complexion, warm the skin and raise the pulse. In concussions or severe shocks, interrupting the respiratory movements and impairing the action of the heart, the modern practice is to give stimulants and to avoid bleeding until re-action occurs. But too often re-action never does occur, from the blood stagnating in the pulmonary vessels. In such cases, the loss of a little blood will facilitate the transmission of the balance through the lungs by removing the congestion. Dr. Dowler was the first to prove, by practising venesection on the dead subject, that the blood, in certain cases, will not only run out, but will flow in a jet and remove post-mortem congestions. The erroneous theory, that the nervous system is the fountain of life, has caused the old practice of bleeding, vomiting and purging for concussions of the brain and severe shocks of the body, to be abandoned, and the stimulating of the nervous system, to produce re-action, to be substituted for it. The nervous system, deriving its life from the circulating blood, and the blood its life and motion from respiration, cannot be stimulated while the blood is stagnant and the respiratory actions suspended. To restore the respiratory process and to put the blood in motion, is the true indication in such cases.

It also appears, by the facts elicited in the experiment just related, that the application of ice water had a good effect in aiding the insufflation to restore animation. The ice-water injection may also have brought the portal system to aid in decarbonizing the blood.

The experiment shows, that it is not so much the absence of oxygen, as the retention of carbonic acid in the blood, which kills so quickly when respiration is suspended; because, when the liver acted, the animal partly recovered from the asphyxia—but until that great decarbonizer of the blood, second only to the lungs, began to act, the oxygen in the air-sacs was not sufficient to prevent the accumulated carbonic acid in the blood from producing asphyxia. In the cold abstraction of death produced by depravation of oxygen and accumulation of carbonic acid in the blood, and also in some congestive diseases, the application of ice water internally and externally would seem to be much better than hot applications and stimulants. For frozen limbs, snow is known to be more effectual than any form of heat. In resuscitating the drowned, stimulants and hot applications are injurious.

The wonderful power of hepatic or bilious purging was well illustrated in the early part of the experiment. Bilious vomiting or bilious purging, when the lungs are crippled in their function, often restores the body to life and energy in cases apparently the most hopeless. The frequency of cold congestive diseases in the South, with pulmonary oppression, and the manifest good effects of calomel and such medicines as excite the liver into action, led, some years ago, to the employment of mercurial cathartics in almost every ailment, without due discrimination. In Europe the cases calling for their employment are much less numerous than in southern latitudes. That method of aiding the lungs, in decarbonizing the blood, is not duly appreciated by European practitioners. Nor can they see why a patient, who would sink under the action of the mildest laxative, should rise and walk before a strong mercurial cathartic has ceased to operate. In typhus, when the lungs began to flag in their action, a twenty-grain dose of calomel was a favorite remedy with Dr. Chapman. The experiment on the crocodile throws some light on the *modus operandi* of that remedy, and also explains the reason why mercurial purgatives are particularly useful in severe wounds of the head, concussions of the brain, and other lesions interrupting the excretion of carbonic acid by the lungs.

Experiments of this kind are full of practical instruction, and ought not to be considered as suiting the visionary more than the practical man. They tend to prevent the practical man from being led into error by visionary theories. Visionary practitioners do not trouble their heads about facts. In contemplating the anatomy of the dead subject, theory conjectured that the heart was the chief agent in circulating the blood. But in seeing the dead subject brought to life, with the viscera exposed to the sight and touch, it plainly appeared that the received theory of the power which produces the circulation of the blood, is not correct—that the *primum mobile* of the circulation is in the reticulated pulmonary tissue and not in the heart. The reddening of that tissue and the injection of its vessels with blood, was preliminary to the restoration of the heart's activity. The nerves, which had been insensible to fire, hooks and forceps, had their sensibility restored in proportion as the redness, motion and vitality of the blood were restored—proving that the life of the nerves and the flesh is in the blood, and that the blood derives its life and motion from respiration.

Dr. Dowler's experiments are forcing physiologists to adopt the doctrine of a diffused sensorium. He has only published a few scraps of the evidence proving that doctrine. He has fully ten volumes of unpublished facts containing evidence in its support, which will be perfectly irresistible. I am not the interpreter of his opinions, but his facts are common property, speaking for themselves. Instead of the brain and nerves being the sensorium, as the Greek and modern philosophers taught him to believe, his own experiments, Riddell's and mine, will demonstrate positively that the blood is the sensorium, as Moses said it was ; if by sensorium be meant the life, the sensibility, the will, the passions, and that species of intelligence called instinct.

In a former experiment, reported in vol. xlvii., page 79, of this Journal, in less than an hour after the trachea had been tied, a very fierce and vigorous animal, called the battle-ground crocodile, was handed over to Dr. Dowler and some eight or ten other physicians, to extort a single symptom of life if they could. The heart was still beating, but muscular irritability had been destroyed in all other parts of the body, by the carbonic acid retained in the blood by ligating the trachea. Fire, knives and forceps, on the bare nerves, failed to extort a single symptom of vitality. In that experiment, insufflation of the lungs was not attempted until after the failure to extort any evidences of life or sensibility. When it was attempted, the lungs were found to be too much torn to hold air, and the process was abandoned. But in the present experiment, it was not until an hour and a half after the compression of the abdomen and thorax by a bandage, and more than two hours and a half after the ligation of the trachea, that insufflation was commenced. It not only restored muscular irritability, but it brought the animal to life, and it is living yet, the fifth day after the resuscitation.

The doctrine of Moses that life, with all its attributes of sensation, volition, mobility and intelligence, exists in the blood (the term life, in Hebrew, meaning life with its attributes), is no more difficult to understand than the doctrine of the Greeks and modern physiologists, which presupposes that life, with all its attributes, is located in the pulpy substance called the brain and its appendages. That the Greeks were wrong and Moses right, can be proved not only by the crocodile, but by every turtle and tarapin on the wide earth. When the heads of these animals are cut off, they will continue to make intelligential motions for some time afterwards, and some of them, as my friend Dr. Cornelius S. Baker, of Bucks Co., Penn., has kindly reminded me, will dart out their headless necks at their persecutors (as the snapping turtle, for instance), proving that they are not only alive, but retain the passion of anger without a head, about as well as with it. Such phenomena are perfectly irreconcileable with the received doctrines of modern physiologists and psychologists, or with the philosophy of the Greeks and Romans, but are in beautiful accordance with those doctrines which have come down to us from the Hebrews.

Canal street, New Orleans, June 17, 1853.

SPINAL CURVATURE.

BY E. C. ROGERS, M.D., OF BOSTON.

[Communicated for the Boston Medical and Surgical Journal.]

Few are aware, even in the medical profession, of the numerous cases of spinal distortion to be met with in society. Indeed, we have heard members of the profession, of no mean repute, and of extensive practice, deny that this derangement was often to be found. It is only where one's attention is specially directed to any particular department of nature, that her testimony in that department will be realized. In no respect is this truth more apropos than in the above.

Let any physician, who attends much to chronic diseases, make it a point to examine the spine carefully. Let him make use of the plumb and line in every case, and we will venture to say that one eighth of his cases will present a very marked palpable deviation from the spinal line. If one is in the habit of merely looking at the tongue, feeling of the pulse, and listening to a few answers to questions concerning feeling pains and aches, he will be most certain to know of but few cases of spinal curvature, perhaps of not one out of five hundred or a thousand of his patients; and then it will be so extremely marked and glaring, as to require no examination to detect it. Such cases will be those so far advanced as to render them hopeless. Hence physicians of such experience will generally affirm that spinal distortions are not only very rare, but quite, if not wholly incurable; certainly that, in the great majority of instances, they are irremediable. Whereas the real fact in the case is exactly the reverse of this; that is, when the whole number of cases of actual curvature is taken into the account, a great majority of them are susceptible of perfect restoration, if proper means be applied. This we shall endeavor to show in the sequel.

Again, it should be considered, that not a very small number of persons, who have curvature of the spine, seldom become known to the physician as chronic patients. It is only in acute attacks that the physician will be called upon; and then his attention will be drawn wholly to the acute symptoms. And in such cases even a very marked distortion will scarcely be noticed, as the attention is drawn another way; or if the eye should detect it, the impression upon the mind would be so slight that it would soon lose sight of it.

To show that we are not alone in the opinion, as to the frequency of this affection, we might refer to the authority of a great number of learned surgeons in Europe, who have devoted much talent to its investigation. Bell, Bamfield, Shaw, Duffin, Beale, Copland, Wilson, Lawrence, and numerous others refer to this fact, and name many apparently very slight causes, which operate to effect the evil under consideration; such causes as are constantly acting in our midst, and are inevitable in their results, unless in some way counteracted. This will be seen more readily when we come to touch upon the object of the spine, its peculiar conformation, its braces and pulleys, so to speak, and the numerous causes which contribute to their deviation from a normal condition.

The human spine is a pillar of support, sustaining the weight (when in the erect position) of the thorax, upper extremities and head—to say nothing of the weight of internal viscera, especially of parts above the diaphragm. Indeed the spine, at its base, sustains nearly the whole weight of the trunk, as well as that of the whole of the head and the superior extremities. For nature does not allow the softer parts of the organism to sustain superincumbent bodies without detriment. Hence all those parts in the trunk are in some way attached to, and dependent from, the spine, namely, by projecting bones, as the ribs, by integuments, tendons, &c.

Now it should be considered, in this connection, that the spine, sustaining so much weight, is not placed mechanically in the *centre* of the weight to be supported, but only *on one side* of it—on the posterior side; so that the weight sustained is all anterior, or anterio-lateral to the spinal column. It hence follows that the mechanical tendency of the spinal curvatures is anteriorally and anterio-laterally. This is seen in infants before the effort at balancing developes itself. Thus, if the infant, at this early period, be set upright on one of the parent's hands, and the other sustains the trunk, it is seen that the head falls forward, and leans upon the chest, or forward and sideways, leaning upon the chest and shoulder. If now the hand be removed from the trunk, the whole trunk will fall forward.

From this it is evident that the agent called into action, in acquiring the power of balancing, is one which is directly opposed to the mechanical arrangement of the spine, and the tendency of its superincumbent weight; that is, for instance—in order for the cervical vertebræ to sustain the head against the tendency of its weight, namely, anteriorly—a power must be exerted within the parts to throw the head posteriorly, and so of the whole form.

This force must represent itself in the muscles, after being originated in the nerve centres, and is one of the first developments of human automatic action. As it acts in opposition to the gravity of the parts, whose tendency is anteriorly, its over-action would be to throw the trunk out of balance posteriorly. Hence after the infant has got over falling forward, it commences falling backward. This naturally excites cautiousness, which, in nervous constitutions, becomes very greatly developed with the balancing power.

From the foregoing it is evident that the erect position is one that is, in the first place, assumed by the power of nerves, muscles and tendons, against the tendency of the weight to follow the law of gravity. The spine alone, then, is not a pillar of support. It is so only when nerves, muscles and tendons act with it. Without it, however, the nerves, muscles, &c., could sustain nothing. With them, it is a flexible, supporting column.

Its flexibility depends upon its being composed of numerous bony parts united to each other by means of an elastic substance interposed between each member. Thus the spine is a connected chain or series of alternate bone and cartilage, or elastic and inelastic substance. This chain is strengthened in its connections by means of ligaments attached to the exterior surfaces, and also by means of muscles and tendons connected with its processes. These being attached to different points of the vertebræ, not only render the spine capable of being sustained upright, but of being curved in any required direction. Hence is it that the spine is not only a flexible, supporting column, but, at any point of it, a fulcrum, upon which muscles are made to act as a counteracting force to gravity.

If the erect posture be assumed as the first position of the spinal column, it must be granted that this posture cannot be maintained without the fulfilment of important conditions, namely, First, the integrity of those muscles and ligaments, constantly employed as natural stays to the spine, while in the above position.

Second, the integrity of those muscles employed as pulleys to lift the superincumbent weight attached to the spine, when the latter is thrown out of its first position.

Third, equality in the thickness of each separate vertebra and intervertebral substance.

The first and second of the above conditions are evident from the preceding observations. Let us for a moment consider the third.

The elasticity of the intervertebral substance renders the spine capable of being curved slightly in every direction—less posteriorly than in any other, from the arrangement of the processes; more laterally; most in the anterior direction.

On bending the spine in any direction, the vertebræ involved in the curve must approach nearer to each other on the concave side; consequently the intervertebral substance also involved in the curve must become thinner by pressure on the concave side. This being only temporary in the normal curvatures, the intervertebral substance recovers its equal thickness when the spine is brought into its normal line,—that is, nearly perpendicular.

Should the intervertebral substance, however, become thinner anteriorly or laterally, the weight of the superincumbent parts would carry the spine in that direction. This would involve a permanent curvature.

Now it is a well-known fact in physiology, that protracted topical pressure excites local absorption. If in any instance, therefore, protracted topical pressure shall take place on any particular side of the intervertebral substance, its absorption must follow as a natural consequence. The absorption on that side would make it permanently thinner than the opposite side, thus inducing permanent spinal curvature. The vertebræ and intervertebral substance, in the curve of the spine, must become cuniform, aptly illustrated by Bamfield by reference to the stones of an arch.

Again. It must appear, according to principles involved in the foregoing, that the progress of spinal curvature from the first degree, takes place by a *mechanical*, as well as by a physiological law. This will appear from the following. "If a column be perfectly upright, it will bear a considerable weight, as long as it preserves its perpendicularity. But if a weight be affixed to the upper extremity of an *elastic* column, curved to the degree of one, and the same weight be placed upon the upper extremity of another, curved to the degree of three or four—in the latter case the superincumbent weight will tend to increase the bending of the column with a greater force and effect than in the former. Hence the more extensive the curvature, the greater will be the compressing power of the superincumbent weight, and the more rapid the absorption that is established."

From the above facts it must follow, first, that whatever causes operate upon the vertebræ, or the intervertebral substance, to alter their equal thickness, tend to produce spinal deformity. In the second place, that whatever causes operate to weaken or destroy the functional integrity of the muscles and ligaments, which brace the spine, tend to produce permanent spinal curvature.

In the first class of these causes, may be included caries of the vertebræ; ulceration, and the like; also the unequal length of the lower extremities; also the habit of sitting the infant upright before the vertebræ and cartilages are sufficiently consolidated; the habit many acquire of leaning in a particular direction, either to favor an affected point, as that of the side, or pit of the stomach, &c. &c., or from the nature of a particular employment, as that of shoemakers, seamstresses, &c.

In the second class of causes may be included the incautious endeavors of parents to make their infants "sit alone," when the ligaments and muscles attached to the spine are yet too weak to act as sufficient braces, especially in cases of infants of scrofulous diathesis, the retardation of muscular development from dentition, scrofula, &c. Also, certain forms of derangement of the digestive and reproductive system, which reflect their influence by sympathy upon the muscles of the spine, through the visceral ganglia. Also affections of the sexual system, and the last named, which reflect their influence upon the motor centres of the spinal system. Also certain affections of the brain, which reflect upon the spinal muscles.

Many of these, after acting as the first causes of curvature, may cease, but the curvature itself remain, and become in turn, in many instances, an exciting cause of other diseases; such as affections of the heart, lungs, spleen, liver, stomach, intestines, kidneys, bladder, uterus, spinal centres, &c., occasioning palpitations of the heart, dyspnœa, pain in the region of the liver, spleen, stomach, causing constipation, spasms, urinal suppression, derangements of the catamenia, and a hundred other symptoms.

Now it must be a very important question to every person laboring under spinal curvature, in whose cases especially any of the above consequences arise, what possibility is there of relief, if not of cure.—A few physicians have contended that there is no cure for spinal distortions. Others oppose this denial with an array of numerous cases where it has been removed; not only in cases of lateral curvature, but in those of incurvation and excurvation. Indeed we could name not a few English writers, of no mean repute, who have detailed unquestionable cases of complete restoration. It is certain, however, that in all cases of true anchylosis, a cure could not be effected. Nor would it be advisable to think of attempting the usual methods, in those cases where the curvature is very extreme, and has been of very long standing,—where for instance the thorax and all the internal organs have become shaped to the deformity,—even should it be possible to bring the spine into its perfect figure. So far, however, as a partial relief of consequent ills is concerned, that is another question, which most physicians are not disposed to hesitate in attempting. Most of us are ready to exhibit a "dose of something," if it be but a "pill" or a "globule." We have all the humanity to "*try that.*" Indeed, in what instance, simple or complex, would a physician refuse to "try what simple means he *had at hand*" to afford relief? True, he might weary of "trying" in such cases, especially when nearly every thing "*at hand*" failed. But even then, would it be wise to turn the wretch adrift, rather, I may say, to sink under the impression there was no spar, not even a straw on life's tide that could help to buoy him up a little longer?

There are cases of curvature, however, where it would be extremely unwise not to attempt a positive cure, if safe and appropriate means could be made use of. But here the question arises, what means are safe and appropriate?

The general answer is—such as would act, first, with reference to the physiological law of the muscles and tendons and ligaments connected with the spinal column. 2. The anatomical structure of the bones and cartilages of the spine. 3. The law of local absorption from topical pressure. 4. With specific reference to the pathological condition of the vertebræ, and the intervertebral substance. 5. With reference to the specific *mechanical* tendency of the curvature and the superincumbent weight, which are to be overcome.

Every well-educated physician will admit that if these points can all be made to harmonize in any set of means, and the first causes of the curvature are not kept still in play, and no true anchylosis, nor destruction of substance, as in caries and the like, exists, it would be quite unpardonable not to make a trial of them. There are very few, who would stand in the way of such a trial, and all good souls, whose judgments became convinced, would heartily commend such means.

If the editor permits, we may endeavor, in a future number, to exhibit some of the means indicated.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, JULY 13, 1853.

Homœopathy—Its Tenets and Tendencies.—Not long ago, we had occasion to speak of the indomitable energy as well as literary industry of Dr. Simpson, of Edinburgh. He is greatly distinguished, and it has been brought about by an untiring exercise of every talent with which Providence entrusted him. This is the legitimate way of rising above the circumstances which would keep a man in ignorance and idleness. Be incessant, be importunate, and fortune will smile kindly on your efforts. Dr. Simpson is always busy. He never waits for leisure, but takes time by the forelock. Labor with him is the first element of enjoyment. In the midst of a vast practice, and besides his duties as a public lecturer, Dr. Simpson is scarcely ever without some kind of a book or pamphlet in the process of construction. Before us is a beautifully printed octavo, of 292 pages, entitled *Homœopathy; its Tenets and Tendencies—Theoretical, Theological and Therapeutical.* Of course, from such a source, it must possess merit, and in Edinburgh it has passed through a third edition, which implies that somebody reads it. There are twenty chapters, in which the keen-sighted author has sifted the pretensions of the new school of practitioners so finely, that their infinitesimal doses could hardly pass his scrutiny.

It is really a logical argument, accompanied by the most potent of instrumentalities, facts, to prove that homœopathic medicines, and no medicines, are essentially the same thing. His knife is so sharp that he slices off the heads of medical pretenders before they begin to feel the edge. Should the work be republished here, it would have a run; but if not, those of our neighbors who may wish to read what Dr. Simpson has said on this exciting topic, are welcome to the use of our copy.

Memphis, Tenn.—Its Health and Mortality.—By a resolve of the Medical Society of Memphis, 1500 copies of a report by Charles T. Quintard, M.D., were published at the expense of the society. Memphis is in lat. 35deg. 8m. north, and long. 90deg. 6m. west, and is situated on a high bluff. After a close analysis of former and later tabular records, it appears, according to this gentleman, that "nearly one third of the diseases that have proved fatal in Memphis, are attributed to the digestive apparatus." Dr. Quintard charges this upon the atmosphere. We are led to suppose there is excessive filthiness in the streets. Water cannot run off, and scavenger carts belong to the reminiscences of a past epoch. Dr. Quintard appeals to the brotherhood respecting the present "creamy mud, through which all pedestrians have waded laboriously." According to this report, Memphis is shamefully neglected by the municipal officers. The business of the city is on the increase, but health and longevity will not be found within its borders, if something is not speedily accomplished by its board of health. With a fine climate, and an elevated locality, where thorough drainage might be economically established, villainous smells rise up to meet the senses, while other nuisances abound and multiply, to the disgust, if not to the positive detriment of the people. Dr. Quintard exhibits a clear and familiar acquaintance with his subject, besides having the moral courage to expose the negligence of the magistrates.

Spirit-Rapping Mania.—Grave men and women, who converse sensibly upon ordinary subjects, are still found to be excessively disturbed by any remark that carries with it a shadow of doubt in regard to the truth or importance of the spiritual revelations of the so-called mediums. The employment of a spirit-rapper is a profitable one. Individuals who would higgle with a hard-working mechanic, and beat him down two cents in the price of a day's wages, pay cheerfully for rapping nonsense, whatever may be the price demanded. People moving in circles supposed to be particularly intelligent, as often as otherwise, are the greatest dupes. Consequently there are the upper ten thousand dollar rappers, who receive a large fee, and the vulgarians, who cheat each other for amusement, without any fee. One of the curious circumstances in connection with this singular furor, is the fact that however placid, kind, courtly and obliging the believers in this "mystery" may naturally be, the moment they discover a disposition to cavil at the silly statements of what *they know, and what they have heard with their own ears*, their ire is up, they fly in a passion, and bedlam shows itself in exhibitions of temper, over which many of them will mourn hereafter, when reminded of this insane devotion to a humbug. A paper is now regularly published in this city, exclusively devoted to heralding the intercourse between the inhabitants of this and the unseen world. In New York, the brotherhood of rappers are a little in advance of us in Boston, as is shown by the following advertisement from a recent newspaper of that city. "This evening, Henry Clay and J. C. Calhoun will deliver a lecture through the mediumship of Rev. R. P. Wilson, Spiritually Magnetized, at Hope Chapel. Subject—The true principles of Government. One part of the lecture will be dictated by H. Clay, and the other by J. C. Calhoun. Commence at 8 o'clock.—Admission 25 cents."

Travelling Quacks.—Quite a new system of quackery is beginning to be extensively practised. The operator gives notice that such enormous demands are made upon him for assistance, that the only way of meeting them is to make announcements, that on Monday, for example, he may be found in Philadelphia, Tuesday in New York, and Wednesday in Boston. All who are desirous of availing themselves of the transcendant skill of the very celebrated and most eminently distinguished Dr. Bolus are notified that they must be punctual in their attendance at his apartments. A few editorial notices on the day previous to his arrival, intimating the immense benefit to be derived from consulting this remarkable physician, prepare the minds of that great multitude who are always trying the latest new thing, and they are accordingly promptly on the ground. Some of these individuals increase the demand for their services by lecturing on the all-important specifics they have at their benevolent disposal.

Berkshire Medical College.—A circular from the thriving and well-conducted medical institution, located in western Massachusetts, reminds us to refer the profession to it as a thorough school of medicine, one that is economical for students, and under the administration of a learned faculty. In all the various changes which have characterized the country schools of medicine, the Berkshire has been distinguished for continued energy, talent, and a high-toned conservative spirit. Dr. Timothy Childs, a son of the founder, now in the chair of Anatomy and Physiology, has just returned from Europe, bringing a knowledge of the latest improvements and discoveries; and, better still, a disciplined mind—thus giving him, with his eminent qualifications, the ability to infuse a vigor into the daily course of instruction, that will redound to the increasing reputation of the College.

Mineral Springs.—No country abounds with such a variety of medicinal waters as ours. Besides the sulphur, graduated down to the flavor of the broth of Weisbaden, we have warm and hot, sweet and sour, astringent and laxative, clear and clouded, and, in short, every variety of medicated waters are, in various parts of the country, copiously gushing out of the earth. Among them all, here at the north, the Saratoga Springs have always been in the ascendant. Since the discovery of the Iodine, and the increasing consumption of the excellent water of the Empire Spring, Saratoga presents new attractions for invalids. As all who might derive benefit from them, cannot leave home, physicians are reminded that the water may be had in Boston, fresh from the fountains, bottled daily at Saratoga, and delivered in this city the same evening. Mr. Green, one of the proprietors, is extremely particular in regard to securing each bottle so that atmospheric air is completely excluded, while the escape of any property belonging to the water is guarded against, and the patient actually has all the medicinal advantages from it in his own house, that he would were he drinking at the aperture in the rock through which it is perpetually boiling.

Deformities of the Human Frame.—A treatise on the nature and treatment of the deformities of the human frame, by W. J. Little, M.D., of London, is a great work. It is great, because it is a practical treatise on every possible form and variety of distortion and malformation to which the body is liable, with minute instructions as to the remedy for such as can be benefited by art, accompanied by a vast number of illustrations. We have not seen a volume, for a long while, that is more needed for the medical libraries of the United States, and it is desirable that it should be re-published immediately. Conditions of the body, as described in this thoroughly-prepared book, are recognized in every town and city in this country. Great advances have been made in orthopedic surgery among us, within the last few years; but there is abundant room for more; and the series of lectures which Dr. Little has recently carried through the press, would, if studied, essentially contribute to uniformity of practice, and to further success. Fourteen years ago, the author gave the medical public instruction on the nature and treatment of club-foot, and analogous distortions, with and without surgical operations He now presents himself, laden with experience, and fortified at every point by a careful series of observations, the value of which is apparent to the reader in passing from one page to another. Under the following heads, the different varieties of deformities are considered, viz.:—deformities from wounds and diseases of the joints, accidents, rheumatism, &c.; from spasm, paralysis, burns, habitual retention in one position; from rickets, weakness and curvatures of bones; from congenital distortions, club-foot and club-hand; from congenital malformations and monstrosities; from distortions of the spine. One hundred and sixty engravings and diagrams enhance the practical value of Dr. Little's labors.

In walking the streets, one is struck with the numbers passing him who are suffering from distorted limbs, club-feet, projecting sternums, wry necks, depressed shoulders, crooked spines, stiff joints, &c., which might, to a very considerable extent, be relieved. A lack of confidence in the resources of surgery, or an ignorance of the improvements and discoveries which are constantly taking place, explains in some measure the existence of these physical embarrassments. A distinct department in the medical colleges, for particular instruction in orthopedic surgery, would be hailed with satisfaction, and add to the reputation of the institution that first creates such a chair.

ERRATUM.—The Female Medical College, referred to in the Journal of June 29th, is located in Philadelphia, and not in the place there stated.

TO CORRESPONDENTS.—The following papers have been received:—A Lecture on Medical Delusions, by Dr. J. H. Nutting; a second paper by Dr. Cartwright on the Hygienics of Temperance; Meeting of the Rhode Island Medical Society; and several documents relating to the late mal-practice trial in New Hampshire.

Deaths in Boston for the week ending Saturday noon, July 9th, 77. Males, 41—females, 36. Accidental, 2—apoplexy, 1—inflammation of the bowels, 3—inflammation of the brain, 1—congestion of the brain, 1—burns and scalds, 2—consumption, 16—convulsions, 3—croup, 1—dysentery, 1—dropsy, 1—dropsy in the head, 3—drowned, 1—infantile diseases, 4—puerperal, 1—erysipelas, 1—typhus fever, 2—scarlet fever, 1—hooping cough, 2—disease of the heart, 1—inflammation of the lungs, 5—congestion of the lungs, 1—marasmus, 5—measles, 2—old age, 5—palsy, 3—pleurisy, 1—teething, 4—tumor, 1—unknown, 2.

Under 5 years, 32—between 5 and 20 years, 9—between 20 and 40 years, 7—between 40 and 60 years, 16—over 60 years, 13. Born in the United States, 47—Ireland, 26—British American Provinces, 1—Germany, 1—Denmark, 1—France, 1.

Bite of a Rattle-Snake—Cure.—By J. C. Blackburn, M.D., Flat Shoals, Geo.—I was called a few days since to visit a negress, some 8 miles from my office, who had been bit by a large rattle-snake. I saw her eight hours after the wound had been inflicted, which was on her ankle. I found the patient deathly sick; cold rigors running over her; pulse 120, small, quick, and thread-like; the entire left leg was swollen to twice its normal size; in a word, I thought she was moribund. She complained of no pain in the affected limb, and even insisted that she had not been bitten. I commenced giving her corn whiskey by the gill, and pushed the remedy until she had taken *two quarts* within twelve hours, when discovering some symptoms of inebriation, it was discontinued. In the mean time I applied warm emollient poultices to the wound, after having applied a cupping glass for one hour. In three days this negress was well and at her usual labor.—She took no medicine save the whiskey, and on the second day a dose of Epsom Salts.

The question here presents itself, would the usual remedies have been attended with success in this case? Had I not considered her in a moribund condition, she doubtless would have been treated, not *empirically*, but *scientifically*. I will remark, however, that this is the *fourth* case, that I have treated successfully with corn-whiskey, occurring from the poison of venomous reptiles. I had oftentimes seen ardent spirits recommended in snake bites, prior to my having prescribed it. My confidence in the remedy never was fully established until witnessing a rash act of a man while in a beastly state of inebriation. He caught a large rattle-snake and held it notwithstanding he was bit several times, until the snake becoming so greatly incensed bit himself, which soon relieved it from its confinement. The reptile speedily died. The man never complained of the least pain or uneasiness.—*Nelson's American Lancet.*

Bill to restrain the Practice of Inoculation in Canada.—At the close of the recent session of Parliament, on the 14th of June, the Governor General was pleased to give his sanction to the following Bill:—intituled, "An act to restrain the injurious practice of inoculating with the smallpox."—The preamble and enacting clause of the Bill read thus:—"Whereas it is highly expedient to restrain the injurious practice of inoculating with the natural smallpox (variola); Be it enacted, &c., That any person who shall produce or attempt to produce, by inoculation with variolous matter, or by wilful exposure to variolous matter, or to any matter, article or thing impregnated with variolous matter, or wilfully by any means whatsoever the disease of smallpox in any person in this Province, shall be liable to be proceeded against and convicted summarily before any two Justices, and for every such offence shall, upon conviction, be imprisoned for any term not exceeding one month."—*Montreal Medical Chronicle.*

Turpentine in Hæmoptysis.—Long experience has taught Dr. Lange, (of Kœnigsberg), that the spirit of turpentine acts more promptly in hæmoptysis than the different methods usually employed in that affection, such as tannin, common salt, acetate of lead, alum, nitrate of potash, cold applications and leeching. The efficacy of turpentine in the treatment of hæmoptysis, has been already recognized by Copland, Wiltshire and others, but this corroboration of it deserves to be recorded.—*Gazette des Hopitaux.*